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05-16-03

In re Patent Application of

FOULADI et al

Atty. Ref.: 723-959

Serial No. 09/726,215

Group: 2671

Filed: November 28, 2000

Examiner:

For: METHOD AND APPARATUS FOR BUFFERING  
GRAPHICS DATA IN A GRAPHICS SYSTEM

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May 12, 2003

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Under 37 C.F.R. §§ 1.56 and 1.97, the applicant directs the attention of the Patent and Trademark Office to the items listed on the attached forms PTO-1449. These items were cited in copending commonly-assigned related patent applications as indicated in the appendix and not yet of record in this case.<sup>1</sup> The Examiner is requested to cite and consider these items in this case.

Applicant is attaching copies of all items other than U.S. patents. The U.S. patents are readily available to the Examiner; applicant will submit a copy upon request.

Should the examiner need anything further to consider these items, please contact the undersigned at the telephone number listed below.

In the event a first Office Action has already been mailed, please treat this paper as a submission under 37 C.F.R. § 1.97(c) and charge Deposit Account No. 14-1140 for the fee required by 37 C.F.R. § 1.17(p). The U.S. Patent and Trademark Office is authorized to charge any fee which was asserted to have been filed or which should have been filed and to credit any overpayment, to that same Deposit Account No. 14-1140.

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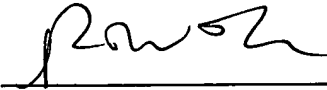
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<sup>1</sup> The identification of the co-pending U.S. Patent Applications in the appendix is not to be construed as a waiver of secrecy as to those applications now or upon issuance of this application as a patent.

Respectfully submitted,

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APPENDIX

The items cited on the attached form PTO-1449 is of record in the co-pending related commonly-assigned patent applications as indicated below:

I. Application No. 09/465,754 filed December 17, 1999 (atty. dkt. no. 723-799) entitled "Vertex Cache For 3D Computer Graphics":

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4,491,836	Collmeyer et al.
4,653,012	Duffy et al.
4,695,943	Keeley et al.
4,710,876	Cline et al.
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4,785,395	Keeley
4,790,025	Inoue et al.
4,812,988	Duthuit et al.
4,829,452	Kang et al.
4,833,601	Barlow et al.
4,965,751	Thayer et al.
4,975,977	Kurosu et al.
5,056,044	Frederickson et al.
5,086,495	Gray et al.
5,163,126	Einkauf et al.
5,179,638	Dawson et al.
5,353,424	Partovi et al.
5,448,689	Matsuo et al.
5,657,045	Katsura et al.
5,657,443	Krech, Jr.
5,659,673	Nonoshita
5,726,947	Yamazaki et al.
5,740,406	Rosenthal et al.
5,745,125	Deering et al.
5,748,986	Butterfield et al.
5,751,930	Katsura et al.
5,754,191	Mills et al.
5,801,720	Norrod et al.
5,821,940	Morgan et al.

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5,838,334	Dye
5,886,701	Chauvin et al.
5,887,155	Laidig
5,940,089	Dilliplane
5,949,421	Ogletree et al.
5,995,120	Dye
6,088,701	Whaley et al.
6,226,713 B1	Mehrotra
6,292,194 B1	Powll, III
6,408,362 B1	Arimilli et al.
6,426,747	Hoppe et al.
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White paper, Rogers, Douglas H., "Optimizing Direct3D for the GeForce 256" (1/3/2000)

Hook, Brian, "An Incomplete Guide to Programming DirectDraw and Direct3D Immediate Mode (Release 0.46)," printed from web site: [www.wksoftware.com](http://www.wksoftware.com), 42 pages

Thompson, Tom, "Must-See 3-D Engines," BYTE MAGAZINE, printed from web site [www.byte.com](http://www.byte.com), 10 pages (June 1996)

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"HOWTO: Animate Textures in Direct3D Immediate Mode," printed from web site [support.microsoft.com](http://support.microsoft.com), 3 pages (last reviewed 12/15/2000)

INFO: Rendering a Triangle Using an Execute Buffer," printed from web site [support.microsoft.com](http://support.microsoft.com), 6 pages (last reviewed 10/20/2000)

U.S. application Serial No. 09/337,293, filed 6/21/1999, "Multi-Format Vertex Data Processing Apparatus and Method

Datasheet, SGS-Thomson Microelectronics, nVIDIA™, RIVA 128™ 128-Bit 3D Multimedia Accelerator (10/1997)

Product Presentation, "RIVA128™ Leadership 3D Acceleration," 2 pages

Hoppe, Hugues, "Optimization of Mesh Locality for Transparent Vertex Caching," PROCEEDINGS OF SIGGRAPH, pages 269-276 (August 8-13, 1999)

II. Application No. 09/726,223 filed November 28, 2000 (atty. dkt. no. 723-751)  
entitled "Z Value Clamping In Near-Z Range To Maximize Precision Of Visually  
Important Z Components And To Avoid Near-Z Clipping In A Graphics  
Rendering System":

4,888,712 BARKANS et al.  
4,907,174 PRIEM  
5,819,017 Akeley et al.  
5,856,829 GRAY, III et al.  
5,923,332 IZAWA  
5,926,182 MENON et al.  
5,982,376 ABE et al.  
5,986,659 GALLERY et al.  
6,046,746 DEERING  
6,052,129 FOWLER et al.  
6,144,387 LIU et al.  
6,157,387 KOTANI  
6,285,779 Lapidous et al.

III. Application No. 09/722,419 filed November 28, 2000 (atty. dkt. no. 723-958)  
entitled "Graphics Pipeline Token Synchronization":

4,989,138 Radochonski  
5,345,541 Kelley et al  
5,467,459 Alexander et al.  
5,487,146 Guttag et al.  
5,768,629 Wise et al.  
5,828,907 Wise et al.  
5,835,792 Wise et al.  
5,872,902 Kuchkuda et al.  
5,982,390 Stoneking et al.  
6,046,752 Kirkland et al.  
6,252,610 Hussain  
6,476,808 Kuo et al.

IV. Application No. 09/722,382 filed November 28, 2000 (atty. dkt. no. 723-961)  
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4,692,880 MERZ et al.

4,935,879	UEDA
5,003,496	HUNT, Jr. et al.
5,422,997	NAGASHIMA
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5,734,386	COSMAN
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5,764,237	KANEKO
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5,877,770	HANAOKA
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5,926,647	ADAMS et al.
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5,963,220	LEE et al.
5,987,567	RIVARD et al.
5,999,198	HORAN et al.
6,002,407	FADDEN
6,011,565	KUO et al.
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6,052,126	SAKURABA et al.
6,057,849	HAUBNER et al.
6,057,851	LUKEN et al.
6,057,861	LEE et al.
6,353,438	VAN HOOK

Whitepapers: "Texture Addressing," Sim Dietrich, January 6, 2000, [www.nvidia.com](http://www.nvidia.com)

V. Application No. 09/722,367 filed November 28, 2000 (atty. dkt. no. 723-968) entitled "Recirculating Shade Tree Blender For A Graphics System":

4,586,038	Sims et al.
5,278,948	Luken, Jr.
5,561,752	Jevans
5,678,037	Osugi et al.
5,867,166	Myhrvold et al.
5,949,428	Toelle et al.
5,999,189	Kajiya et al.
6,016,151	Lin
6,043,821	Sprague et al.
6,236,413	Gossett et al.
6,331,856	Van Hook et al.

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The RenderMan Interface Version 3.1," (September 1989)

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NVIDIA.com, technical presentation, "Introduction to DX8 Pixel Shaders (11/10/2000)

NVIDIA.com, technical presentation, "Advanced Pixel Shader Details" (11/10/2000)

"Developer's Lair, Multitexturing with the ATI Rage Pro," (7 pages) from ati.com web site (2000)

VI. Application No. 09/726,218 filed November 28, 2000 (atty. dkt. no. 723-960) entitled "Method And Apparatus For Efficient Generation Of Texture Coordinate Displacements For Implementing Emboss-Style Bump Mapping In A Graphics Rendering System":

5,900,881	IKEDO
5,880,736	PEERCY et al.
5,808,619	CHOI et al.
4,808,988	BURKE et al.

6,014,144 NELSON et al.  
5,224,208 MILLER, JR. et al.  
6,078,334 HANAOKA et al.  
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4,974,177 NISHIGUCHI  
6,081,274 SHIRAISHI  
6,031,542 WITTIG  
5,621,867 MURATA et al.

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VII. Application No. 09/722,381 filed November 28, 2000 (atty. dkt. no. 723-962) entitled "Method And Apparatus For Environment-Mapped Bump-Mapping In A Graphics System":

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4,615,013 YAN et al.  
5,544,292 WINSER  
5,563,989 BILLYARD  
5,809,219 PEARCE et al.  
5,870,102 TAROLLI et al.  
5,923,334 LUKEN  
5,956,043 JENSEN  
6,049,337 VAN OVERVELD  
6,052,127 VASWANI et al.  
6,078,333 WITTIG et al.  
6,191,794 PRIEM et al.

VIII. Application No. 09/726,216 filed November 28, 2000 (atty. dkt. no. 723-967) entitled "Achromatic Lighting in a Graphics System and Method":

4,275,413 Sakamoto et al.  
5,016,183 Shyong  
5,097,427 Lathrop et al.



5,361,386	Watkins et al.
5,467,438	Nishio et al.
5,473,736	Young
5,495,563	Winser, Paul A.
5,504,499	Horie et al.
5,557,712	Guay
5,566,285	Okada
5,649,082	Burns
5,687,304	Kiss, Kenneth W.
5,740,343	Tarolli et al.
5,943,058	Nagy
5,956,042	Tucker et al.
6,023,261	Ugajin
6,232,981	Gossett, Carroll Philip
6,239,810	Van Hook et al.
6,417,858	Bosch et al.

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IX. Application No. 09/726,226 filed November 28, 2000 (atty. dkt. no. 723-964) entitled "Method And Apparatus For Anti-Aliasing In A Graphics System":

4,897,806	COOK et al.
5,239,624	COOK et al.
5,394,516	WINSER
5,600,763	GREENE et al.
5,651,104	COSMAN
5,764,228	BALDWIN
5,818,456	COSMAN et al.
5,859,645	LATHAM
5,877,771	DREBIN et al.
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6,028,608	JENKINS
6,038,031	MURPHY

6,469,707 B1 Douglas Voorhies  
6,496,187 B1 Michael Deering et al.

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X. Application No. 09/722,380 filed November 28, 2000 (atty. dkt. no. 723-957) entitled "Graphics System With Embedded Frame Buffer Having Re-configurable Pixel Formats":

5,018,076 JOHARY et al.  
5,241,658 MASTERSON et al.  
5,307,450 Grosssman  
5,543,824 PRIEM et al.  
5,559,954 SAKODA et al  
5,650,955 PUAR et al.  
5,657,478 RECKER et al.  
5,694,143 Fielder et al.  
5,703,806 PUAR et al.  
5,742,788 PRIEM et al.  
5,890,190 Rutman  
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5,933,154 HOWARD et al.  
6,041,010 PUAR et al.  
6,075,543 AKELEY  
6,215,497 Leung  
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XI. Application No. 09/585,329 filed June 2, 2000 entitled "Variable Bit Field Color Encoding" (atty. dkt. no. 723-749):

4,918,625 Yan  
5,416,606 Katayama et al.

5,606,650 Kelley et al.  
5,767,858 Kawase et al.  
5,805,175 Priem  
5,880,737 Griffen et al.  
5,886,705 Lentz  
5,894,300 Takizawa  
5,914,725 Mcinnnis et al.  
5,986,663 Wilde  
6,005,583 Morrison  
6,005,584 Kitamura et al.  
6,016,150 Lengyel et al.  
6,054,993 Devic et al.  
6,339,428 B1 Fowler et al.

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<http://www.futuretech.vuurwerk.nl/alpha.html>

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<http://toolbox.sgi.com/TasteOfDT/d...penGL/advanced98/notes/node41.html>, June  
11, 1998

10.2 Alpha Blending,  
<http://www.sgi.com/software/opengl/advanced98/notes/node146.html>

10.3 Sorting, <http://www.sgi.com/software/opengl/advanced98/notes/node147.html>

10.4 Using the Alpha Function,  
<http://www.sgi.com/software/opengl/advanced98/notes/node148.html>

Winner, Stephanie, et al., "Hardware Accelerated Rendering Of Antialiasing Using  
A Modified A-buffer Algorithm," Computer Graphics Proceedings, Annual  
Conference Series, 1997, pp 307-316

XII. Application No. 09/726,212 filed November 28, 2000 (atty. dkt. no. 723-956)  
entitled "Method And Apparatus For Dynamically Reconfiguring The Order Of  
Hidden Surface Processing Based On Rendering Mode":

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5,268,995 Diefendorff et al.  
6,052,125 Gardiner et al.

6,111,584 Murphy, Nicholas J.N.  
6,144,365 Young et al.  
6,166,748 Van Hook et al.  
6,172,678 B1 Shiraishi  
6,204,851B1 Netschke et al.

XIII. Application No. 09/726,212 filed November 28, 2000 (atty. dkt. no. 723-973) entitled "Method And Apparatus For Providing Non-Photorealistic Cartoon Outlining Within A Graphics System":

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5,666,439 Ishida et al  
5,684,941 Dye  
5,757,382 Lee  
5,933,529 Kim  
5,940,538 Spiegel et al  
6,021,417 Massarksy  
6,026,182 Lee et al  
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Schlechtweg, Stefan et al., "Emphasising in Line-drawings," Norsk samarbeid innen grafisk databehandling: NORSIGD Info, medlemsblad for NORSIGD, Nr 1/95, pp. 9-10

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<http://www.pixar.com/products/renderman/toolkit/Toolkit/AppNotes/appnote.24.html>

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Hachigian, Jennifer, "Super Cel Shader 1.00 Tips and Tricks," 2 pages, [http://members.xoom.com/\\_XMCM.jarvia/3D/celshade.html](http://members.xoom.com/_XMCM.jarvia/3D/celshade.html)

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[http://www.digimation.com/asp/product/asp?product\\_id=33](http://www.digimation.com/asp/product/asp?product_id=33)

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[http://www.softimage.com/3dsupport/techn...uments/3.8/features3.8/rel\\_notes.56.html](http://www.softimage.com/3dsupport/techn...uments/3.8/features3.8/rel_notes.56.html)

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<http://www.visi.com/~mcdonald/toony.html>

"Cartoon Shading, Using Shading Mapping," 1 page,  
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entitled "Method And Apparatus For Providing Improved Fog Effects In A  
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5,363,475	BAKER et al.
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5,415,549	LOGG
5,432,895	MYERS
5,535,374	OLIVE
5,573,402	GRAY
5,616,031	LOGG
5,724,561	TAROLLI et al.
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5,990,903	DONOVAN
6,005,582	GABRIEL et al.
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6,070,204    Poisner, David  
6,078,311    Pelkey, Michael H.  
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XVI. Application No. 09/726,221 filed November 28, 2000 (atty. dkt. no. 723-955)  
entitled "Method And Apparatus For Texture Tiling In A Graphics System":

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5,490,240    FORAN et al.  
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6,104,415    GOSSETT  
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entitled "Z-Texturing":

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5,751,291    Olsen et al  
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5,949,423    Olsen  
5,977,979    Clough et al  
6,037,948    Liepa  
6,057,847    Jenkins  
6,088,035    Sudarsky et al  
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6,111,582    Jenkins  
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